Summary Report:

The Quality Workplace Program Evaluation

June 2003

HEALTH QUALITY COUNCIL

Over the life of the Quality Workplace Program Evaluation, the Health Quality Council Health Human Resources Project team included: Tanya Dunn-Pierce and Joanne Hader as project leaders; Lisa Clatney and Erin Walling as researchers; Christa Morhart and Lisa Fedorowich as research assistants; Dianne Ferguson as research transfer officer; and, Greg Basky as communications officer. Thanks to Bonnie Brossart, Laurence Thompson, and Barbara Nisbet for reviewing documents and data. Thanks also to the members of the Provincial Nursing Council Working Group on Magnet Environments who advised the evaluation: Dianne Anderson, Carla Bolen, Donna Brunskill, Karen Eisler, Joanne Hader, Gaye Holliday, Renee Holowaty, Kelly Kummerfield, Rosalee Longmoore, Charlene Sarafin, Nancy Uncles, and Carolyn Hoffman (chairperson).

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Introduction

The Quality Workplace Program (QWP) was established to address retention of professional nursing staff in Saskatchewan through exploring the attributes of quality workplaces or magnet environments for nursing. The program was intended to improve patient outcomes, nurse outcomes, and organizational outcomes through quality improvement in nursing workplaces.

The Health Quality Council, formerly the Health Services Utilization and Research Commission, had an agreement to evaluate the Saskatchewan Registered Nurses' Association (SRNA) Quality Workplace Program (QWP) pilot project. The Provincial Nursing Council Working Group on Magnet Environments acted as advisor to the evaluation. The purpose of the overall evaluation is to determine the effectiveness of the QWP in three pilot sites and one control site in Saskatchewan, including both process and outcome components.

Pilot sites were selected from across the province by the SRNA QWP advisory group based on written submissions from interested health districts. The sites selected included a unit in the Moose Jaw Union Hospital, a unit in the Parkridge Centre in Saskatoon, and the Unity Integrated Care Facility. A unit in the Victoria Hospital in Prince Albert acted as the control site for the project.

The specific workplace activities implemented in each site (Appendix A) were determined by the QWP working group at each individual site. The QWP was not initiated at the control site. This site was assumed to represent a usual workplace over the period of the evaluation.

Evaluating the process

Process evaluations, in general, answer the questions: What happened during the program implementation? What components were valuable? What could be improved?

Methodology

The activities of the QWP process evaluation included interviews with the QWP facilitator and 20 staff across the three sites, some of whom were working group members and some who were not. The interviews took place within six months after the program had begun, following the end of the facilitator's formal involvement with each site working group. As well, evaluators reviewed working group documentation and observed feedback meetings with the site working groups.

Findings

The process evaluation identified the characteristics that helped the QWP to succeed. The perception of the program as a positive step was one key; staff viewed the program as a way to improve the workplace for both patients and staff. The alternate dispute resolution (ADR) training gave the working group a common foundation on which to build. The ADR training, along with the trained facilitator, provided a mechanism for working through group dynamics such as setting rules for conversation to make sure everybody had a chance to speak and to

listen. Also key were having an external facilitator, management support, and representation from all staffing categories on the working group.

Challenges—personal, practical, process, and organizational—were also identified. At a personal level, working group members were challenged to overcome scepticism, and to sell the changes of the program to other staff. Practically, there was a feeling that there were lots of meetings and pressure to produce results in a short time frame. The process issues included lack of clarity in goals, uncertainty about how working group members were selected, and feelings of impatience with the time spent on identifying issues rather than coming up with quick solutions. Organizationally, there were sometimes struggles to work as a team—between different levels of staff, between newer and older staff, or between staff and management.

The process evaluation confirmed the key components of the program. Specifically, enhancing the capacity of front line staff to identify shared problems, and to cultivate the resources, skills and commitments to implement solutions. Other key components for success are the commitment of the working group members, skilled facilitation, and the alternate dispute resolution training.

The process evaluation also highlighted some of the challenges involved in improving work environments. While the QWP brought about change, change can often be uncomfortable. Each working group needed to remember its collective vision for change and to communicate it repeatedly and in a variety of ways with other staff. The program encouraged staff to take responsibility for leadership. This role was sometimes difficult to accept and develop—for both management and staff—as their workplaces typically used a hierarchical management style. As working group members became more comfortable in their roles, they needed to help other staff feel as though they were part of the team by involving others in specific tasks, activities, or decisions. Doing so is helping to expand the program from a 'working group experience' to a 'unit experience' and beyond.

Based on the process evaluation we conclude the current approach of the Quality Workplace Program (QWP) is strong. Although building quality workplaces does not necessarily require the introduction of an additional 'program' or 'initiative,' the approach taken by the QWP addresses the workplace's culture—an essential contributor to sustainable change.

Evaluating the outcomes

The main hypothesis for the study was that the QWP would improve nursing work life which would improve nursing client care. We know from the literature[1] that improving nursing client care improves client health outcomes.

Interviews

Interview participants from all three sites, described on page one, had many positive comments about the impact of the program. They noted there was better communication

[1] Please see accompanying HQC document *Selected Literature: Quality Workplaces and Nursing*, June 2003.

among staff, between management and staff, and between departments. Management involvement in the program helped staff to see managers as more approachable, and as part of the team. Staff members interviewed shared a growing sense of empowerment, a feeling they had a voice and could make decisions. They began taking actions to solve problems. Many interview participants noted the morale in their workplaces had improved.

Staff surveys

The primary hypothesis for the QWP survey was that there would be an increase, or at minimum a maintenance, of the mean score on the "work life" scale if the program had its intended effect. A secondary hypothesis was that there would be an increase or maintenance of the mean score on both the "providing client care" and "support for my work" scales.

Methodology

Prior to the QWP intervention, a survey was administered at each site to generate baseline data. One year later, the same survey was re-administered at each site to determine if the intervention had resulted in a measurable change. A researcher traveled to each site to administer both surveys to eligible staff over two pre-determined days. Surveys administered at the control site were done within two weeks of those administered at two of the three pilot sites. The third pilot site completed its surveys three months prior to the other sites. In order to increase the response rate at one of the sites, surveys were sent to all eligible staff members' homes along with a letter of support from the Health Quality Council and the respective QWP site working group. Completed surveys were returned by mail.

Measures

To assess nurses' perceptions about their workplaces, a self-administered survey was developed in consultation with the SRNA and the Registered Nurses' Association of British Columbia. The survey, pilot tested with nurses from another site in Saskatchewan, consisted of 88 questions, which together formed the following scales: 1) collaborating with colleagues; 2) providing client care; 3) support for my work; 4) work life; 5) career support; 6) fostering evidence-based practices; 7) workplace culture; and 8) nursing leadership. Response categories were on a 0-5 scale, with "0" indicating that the attribute was always absent in the workplace, and "5" indicating that the item was always present in the workplace. Participants also had the option of choosing a "not applicable" or "don't know" category for each question.

The principal analysis of the surveys considered the difference between the pre and post survey scores for the three evaluation scales (work life, providing client care, support for my work). The two surveys were compared using independent sample t-tests.

All data were verified for errors, outliers, and distribution. No outliers were found and means and standard deviations were all in the plausible range. Data also met the assumptions for normality and homogeneity of variance. T-tests were used to determine if there was a statistically significant change in the mean score for each of the scales as well as for individual questions.

Results

Except for a statistically significant decrease in the mean score of the "providing client care" scale in the control site, there were no statistically significant differences in the scores, for the three main scales, in any of the sites (see Table 1).

Table 1: Mean summary score for evaluation scales at each site

Scales	Site A		Site B		Site C		Control site	
	Pre-	Post-	Pre-	Post-	Pre-	Post-	Pre-	Post-
Providing client care	3.2	3.4	3.82	3.60	3.72	3.73	3.95	3.44*
Support for my work	3.0	3.3	3.69	3.66	3.37	3.60	2.96	2.78
Work life	3.2	3.2	3.31	3.54	2.97	3.30	2.92	2.77

* Scale showed a statistically significant decrease in mean from pre- to post-survey

In total, 39 individual questions made up the three main scales for the evaluation. The individual questions were analyzed to determine if there was any difference in response between the pre- and post-surveys. Table 2 shows the questions for the control site that had a statistically significant ($p<0.05$) decrease in mean from the pre- to post-survey. There were no questions for the control site that showed a statistically significant increase in mean.

Table 2: Questions in the evaluation scales that had a statistically significant change in mean from pre- to post-survey in the control site

Questions	Scale	Pre-survey mean	Post-survey mean	p-value (t-test)
I retain responsibility and accountability for the care of my clients	Client Care	4.78	4.16	.048
Client teaching is an integrated part of client care	Client Care	3.95	3.00	.015
Client and families receive information about services available to them	Client Care	4.39	3.58	.033
If required, assistance is available for making clinical decisions	Support for Work	4.26	3.63	.047
I am consulted on decisions about appropriate mix of personnel to meet clients' needs	Work Life	2.84	1.94	.020

Site A had five questions that showed a statistically significant ($p<0.05$) increase in mean and one question that demonstrated a statistically significant decrease in mean (Table 3).

Table 3: Questions in the evaluation scales that had a statistically significant change in mean from pre- to post-survey in site A

Questions	Scale	Pre-survey mean	Post-survey mean	t-statistic	p-value (t-test)
Increase in mean:					
Adequate time is available to spend with clients	Client Care	1.41	2.28	-2.89	.006
Clients receive individualized holistic care	Client Care	2.88	3.73	-2.25	.030
I participate in identifying clients' needs	Client Care	3.33	4.0	-2.07	.044
Therapeutic relationships with clients are established and maintained	Client Care	2.96	3.87	-2.60	.013
Noise levels for clients and staff are minimized	Support for Work	1.62	2.72	-2.93	.005
Decrease in mean:					
My organization supports me to act professionally and responsibly if it is necessary to report a co-worker to protect client safety	Work Life	4.38	3.56	2.08	.044

For site B, only one individual question had a statistically significant increase in mean from pre- to post-survey (Table 4). No questions at this site had a statistically significant decrease in mean.

Table 4: Question in the evaluation scales that had a statistically significant change in mean from pre- to post-survey in site B

Question	Scale	Pre-survey mean	Post-survey mean	t-statistic	p-value (t-test)
In the past year I participated with my co-workers in an activity designed specifically to strengthen workplace care teams	Career Support	2.32	3.82	-3.59	.001

Site C showed a statistically significant increase in mean for the two individual questions shown (Table 5).

Table 5: Questions in the evaluation scales that had a statistically significant change in mean from pre- to post-survey in site C

Questions	Scale	Pre-survey mean	Post-survey mean	t-statistic	p-value (t-test)
I go home at the end of the day knowing I have done a good job	Work life	3.0	3.9	-3.03	.004
Needed supplies and equipment are accessible	Support for my work	3.0	3.9	-3.58	.001

Comments added at the end of the staff surveys provided an additional perspective to interpreting the survey responses. For the survey administered before the QWP began in the sites, the majority of the comments added were from the control site. Respondents expressed concerns about the physical environment (poorly maintained equipment, uncleanliness, and poorly planned space), the little amount of time they had devoted to direct patient care, and low morale. Respondents from one of the pilot sites expressed concern about an absence of formal nursing leadership and diverse relationships across disciplines.

For the survey administered following the QWP, comments were mixed with respect to whether the QWP had made a change. Some people felt the work environment was positive, were hopeful things would change, and time was needed to see those changes. Others had concerns about working to their full scope of practice, and working in a stressful and negative work environment. Some control site respondents added comments about concerns with work scheduling and physical space.

Conclusion

No scales showed a statistically significant change in mean score before and after the implementation of the QWP. However, relative to the control site, the QWP pilot sites have seen modest improvement in scores for particular questions on the surveys which appear to be linked to the implementation of specific interventions directed at these areas.

Patient/resident survey

Methodology

Patient/resident surveys consisting of ten close-ended questions were used to evaluate patient satisfaction with the care they received. Patients or residents were evaluated before the QWP began and again six months later. In situations where residents were not capable of completing the survey, it was mailed to a family member or caregiver to complete.

Data were checked for recording errors, outliers, and distribution. Histograms and normal probability plots indicated all variables were normally distributed and variances equal. T-tests were used to compare the pre- and post-survey means for each question on the survey as well

as the overall summary score. The Mann-Whitney U non-parametric test was used to confirm the findings of the t-tests.

Results
Response rates for the survey are shown in Table 6.

Table 6: Response rates for the patient/resident surveys at each site

	control site*	site A	site B	site C*
Pre-survey	N/a	53% (19/36)	71% (24/34)	n/a
Post-survey	N/a	75% (27/36)	68% (23/34)	n/a

*Response rates could not be calculated for these sites since the number of surveys administered was not recorded

The patient surveys from sites B and C did not show a statistically significant difference in any of the survey questions from pre- to post-survey. Site A showed a statistically significant decrease in mean from pre- to post-survey for the questions:

- Overall, how would you rate the skills of the nursing staff?
- Overall, what is your opinion of the care you receive from the nursing staff?

Paradoxically, over 90% of respondents at site A rated both questions as good or excellent in the post-survey. For sites A and B family members or caregivers, not the patients themselves, completed the patient surveys.

Conclusion
Very little difference was found between the patient surveys administered before and after the QWP.

Organizational indicators

Data to support organizational indicators were collected from each site or from the Saskatchewan Association of Health Organizations (SAHO) payroll system for the calendar year prior to the QWP program and the year of the program. The organizational indicators that were analyzed using administrative data were: staff mix, work-related injuries, sick time, number of staff and reason for leaving employment, and length of patient stay.

Staff mix
Figure 1 shows the percentage of all staff (including non-nursing) that was full-time, part-time, or casual at each site in 2001 and 2002. The ratio of full-time, part-time, and casual staff varied across the sites. The control site had a higher percentage of full-time staff and a lower percentage of casual staff compared to the pilot sites and the provincial average. Site B had the lowest percentage of full-time staff and highest percentage of casuals.

Figure 2 shows the average number of registered nurses, licensed practical nurses, and special care aids employed in each of the sites during the study period.

Figure 1: Staff classification of all casual, part-time and full-time staff at each site and provincially in 2001 and 2002

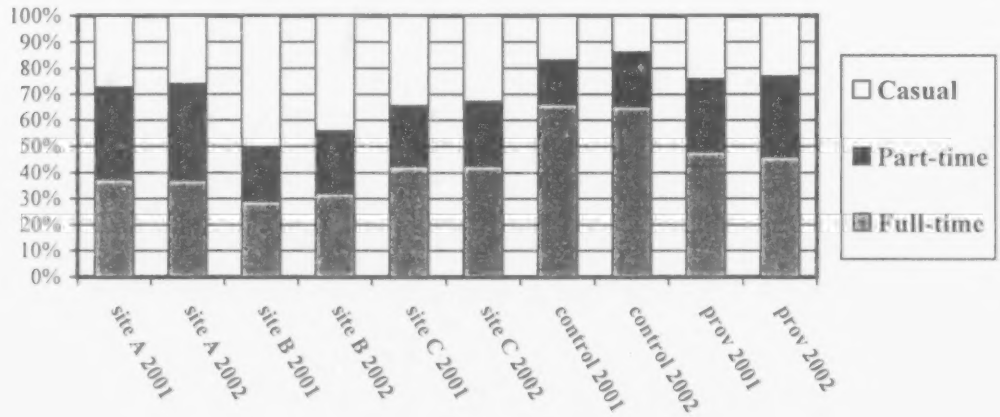
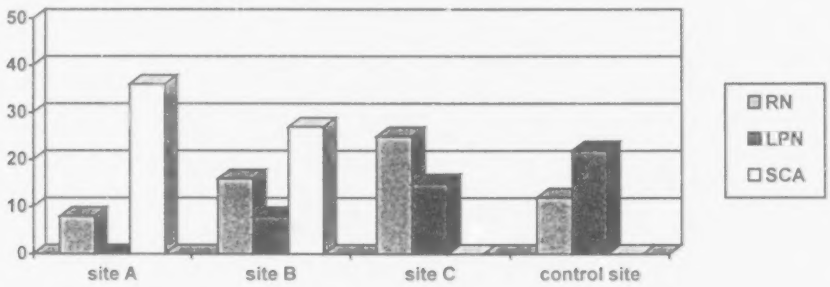


Figure 2: Number of staff in each nursing position at each site on average during the study period



*numbers are an estimate only; casuals are not included for all sites

Work-related injuries

Little change occurred at the three pilot sites from 2001 to 2002 in the number of reported work related injuries (Table 7). The control site reported an increase in injuries in 2002 compared to 2001; however, no incident reports could be found at this site for the first nine months of 2001. It is unclear if there were truly no injuries reported at that time or if the incident reports were lost.

Table 7: Reported work related injuries at all site for 2091 and 2002

Year	Site A	Site B	Site C	Control
2001	33	5	7	7[b]
2002	34	5[a]	5	36

[a] Data not available for the last quarter of 2002

[b] Unclear at this site if incident reports may have been lost for the first nine months of 2001

Sick time

The average number of paid sick hours per paid full-time equivalent (FTE) was the formula used to compare changes in sick time across the sites and within each site. Table 8 summarizes the average number of paid sick hours per paid FTE at each site for 2001 and 2002. Site A showed no change in sick hours per FTE from 2001 to 2002. Site B showed a slight increase in sick hours per FTE in 2002 compared to 2001. Site C had nearly identical sick hour values as the provincial average for both years. The control site showed the largest change with a 50% decrease from 2001 to 2002. It is unclear why such a large decrease in sick time was observed for this site.

Table 8: Paid sick hours per paid full-time employee at all sites and provincially

Year	Site A	Site B	Site C	Control	Provincial average
2001	52.67	24.91	29.85	41.24	29.01
2002	52.96	28.23	23.5	20.6	24.24

Number of staff and reason for leaving employment

The number of people leaving employment and their reasons for leaving was not closely monitored at any of the sites. Site A could not provide any data on the number of staff leaving employment. At site B, seven staff members exited positions in 2001 and six staff left in 2002. The reasons for leaving in both years were similar: four people in 2001 relocated with family and two people quit for other employment; in 2002, two people relocated, two retired and two quit for unknown reasons. At site C, fifteen people left their positions in 2001 and eight left in 2002; reasons for staff leaving were not available from the site. Site A and the control site were not able to provide reasons for staff leaving during this time. Length of time to fill vacant staff positions was not recorded at any of the sites.

Length of patient stay

Table 9 indicates the average length of stay for patients at the two sites with medical patients. No change in length of stay was observed for either site. The average length of patient stay was not relevant for the other two pilot sites as they included long-term patients/residents.

Table 9: The average length of stay for patients at site C and the control site

Year	Pilot Site with Medical Patients	Control Site
2001	6.67 days	18.8 days
2002	6.78 days	18.6 days

Conclusion

Given the low quality (consistency and comprehensiveness) of the data for the organizational indicators, we were unable to draw any conclusions about the QWP in the sites. While planning the evaluation, we recognized that the time available might be too short to identify any significant changes in organizational outcomes.

Considerations/limitations

The following considerations need to be kept in mind when interpreting the outcome evaluation information presented:

- There were changes in the control site that may have influenced the assumption of a "usual" or "typical" site for comparison purposes. For example, specific initiatives to decrease sick time on the unit, an increase to the number of LPNs on the unit, and new management just prior to the evaluation period could have influenced the data;
- The Saskatchewan health system was in a process of transition with organizational restructuring occurring in all of the sites;
- The timeframe required to see change was too short;
- We were unable to match individual pre- and post-surveys limiting data analysis;
- The patient survey was designed for clients to complete themselves, and the tool was not designed to measure the family's perspective;
- There were low response rates for the patient surveys; and,
- The organizational data were not consistently collected at all sites affecting data reliability and validity.

Overall, the pilot projects cautiously demonstrated that positive changes were happening. Most of the people interviewed felt more positive about themselves, their co-workers and their environments. The staff surveys showed modest improvements in perceptions about the quality of workplaces compared to the control site. Improvements that were seen at each site appear to reflect working group activities.

Although the data on changes in patient or organizational outcomes were inconclusive, having these baseline measures is important as QWP activities continue at the pilot sites.

Appendix A

Quality Workplace Program initiatives reported by each site

Site A

Changes made during the formal program:

- Started a monthly lifestyle draw for anyone who had done something healthy during the month to add their name to that month's draw; a big draw at the end of the year was planned from all names from the monthly draws
- Alternate Dispute Resolution training was provided for all staff
- Added more staff to some shifts and four-hour evening program attendant
- Staff BBQ was held
- Regular meetings with laundry personnel were established
- Revisions were made to the care plan
- An activity room was created for residents

Changes anticipated by the working group to occur after the formal program had ended:

- Changes to the staff schedule – possibly moving to twelve-hour shifts, changing start and end times
- Having healthier food choices available for evening and night staff, and increase healthy choices available in general for the cafeteria
- Create a quiet area for staff
- Improve maintenance – windows, sinks, chipped paint, etc
- Getting new name tags
- Ongoing social events planned for unit

Site B

Changes made during the formal program:

- Bulletin board designated for Quality Workplace meeting minutes and updates
- "Beefs & Bouquets" boxes placed in staff room, photocopy room and service entrance for staff to confidentially write notes praising other staff or work occurrences or to voice problems or concerns; bouquets were typed and placed on a bulletin board and beefs discussed in the working group meeting. A box in the service entrance was created for family members to contribute.
- Paper was left out for staff to write ideas for the working group
- A binder was put in the staff room with QWP meeting minutes and handouts
- Announcements about the QWP were added to pay stubs
- Members of the QWP working group were encouraged to talk with others about workplace changes; Alternate Dispute Resolution training was provided for all permanent staff (not mandatory, provided on days off with pay)
- Provided information on harassment policy to staff
- Held a confidentiality week to promote importance of patient confidentiality in the workplace
- A "Question and Answer" board was put up for staff to ask questions
- Motivational posters were put up around the facility

- Held meetings with other departments (dietary, housekeeping) to address problems raised by nursing staff regarding non-nursing duties/issues
- Regular meetings with housekeeping continued
- Wellness draws conducted with cash prizes to promote reduction in sick-time
- New name tags for staff
- Installed window in the Emergency entrance door

Changes anticipated by the working group to occur after the formal program had ended:

- In-service for nursing staff on charting
- Creation of a phone fan list for disaster/fire emergencies
- CPR to be provided for all staff and choking review for all staff

Site C

Changes made during the formal program:

- New equipment was purchased including new beds, recliner for patient rooms, commodes, chairs IV pumps and clipboards
- A new computer was provided for staff along with increased resource material
- A fax machine was purchased for the front desk so blood work could be sent directly to the staff
- Staff participated in Alternate Dispute Resolution training
- Extra staff were added to some shifts
- Other departments (i.e., housekeeping, maintenance) were notified of problems that staff in the unit were having that related to these departments
- Regular meetings were initiated with pharmacy, and housekeeping and included front line staff from the unit
- Renovations were done in the medication and conference rooms
- Renovations were also done in the coffee room to make it larger and installed a window
- Flex-scheduling was considered but voted down by staff
- Bulletin board was created for posting all Quality Workplace meeting minutes
- All staff were invited to attend working group meetings
- Established an education fund; developed criteria and application form
- QWP group purchased medical/nursing books for the unit and they are kept in the unit library for all staff to use